



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/576,501

04/20/2006

Yoshiharu Sato

062413

6354

38834

7590

03/22/2011

WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP
1250 CONNECTICUT AVENUE, NW
SUITE 700
WASHINGTON, DC 20036

EXAMINER

LEWIS, TISHA D

ART UNIT

PAPER NUMBER

3655

NOTIFICATION DATE

DELIVERY MODE

03/22/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentmail@whda.com

Office Action Summary	Application No.	Applicant(s)	
	10/576,501	SATO, YOSHIHARU	
	Examiner	Art Unit	
	TISHA D. LEWIS	3655	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 3-12 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1,3-6 and 10-12 is/are rejected.
- 7) ☒ Claim(s) 7-9 is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. ____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____. |

DETAILED ACTION

The following is a response to the amendment received December 17, 2010 which has been entered.

Response to Amendment

Claims 1 and 3-12 are pending in the application. Claim 2 has been cancelled.

-The 102 rejections have been withdrawn due to the prior art of record used in the rejections not disclosing controlling the clutch transmission torque according to engine speed and throttle opening.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Fischer et al 6152275. As to claim 1, Fischer discloses an engine power transmission device having an engine (2) which is controlled by a throttle (at 15), a torque converter (column 12, lines 25-29) which transmits a power of the engine to a load device (4), a clutch (3) which is provided between the engine and converter (column 12, lines 25-29 discloses that clutch 3 can be used in or in conjunction with a torque converter wherein the clutch would be positioned on the input side of the converter opposite the engine) and is capable of controlling a transmission torque transmitted thereby (controls torque transmitted from engine to load/transmission), a throttle actuation device (column 14,

Art Unit: 3655

lines 37-39) which actuates the throttle, an engine rotational speed detector (16) which detects a speed of the engine, a clutch actuation device (10) which actuates the clutch and controls transmission torque, a throttle opening amount detector (15) which detects an opening amount of the throttle and a controller (13) which in response to the engine speed detector and throttle detector, commands the clutch actuation device so as to control the transmission of torque by the clutch according to the engine speed and throttle opening amount (Figure 11 and column 26, lines 22-34 discloses that parameters such as engine rpm or throttle position are inputted to control the clutch torque). As to claim 10, Fischer discloses an engine power transmission method for transmitting a power of an engine (2) to a torque converter (column 12, lines 25-29) via a clutch (3) which is capable of controlling a torque transmission ratio by controlling the engine in response to a throttle (at 15) and actuating the clutch so as to control a transmission torque transmitted thereby according to an engine speed and a throttle opening amount (Figure 11 and column 26, lines 22-34 discloses that parameters such as engine rpm or throttle position are inputted to control the clutch torque).

Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Niikura et al 4577737. As to claim 1, Niikura discloses an engine power transmission device having an engine (column 3, line 34) which is controlled by a throttle (according to 45), a torque converter (1) which transmits a power of the engine to a load device (connected to 9), a clutch (2) which is provided between the engine and converter (as shown in Figure 1, clutch 2 is disposed between engine shaft 6 and converter turbine 7) and is capable of controlling a transmission torque transmitted thereby (controls torque

Art Unit: 3655

transmitted from engine to load/transmission), a throttle actuation device (well known in art as disclosed in Fischer) which actuates the throttle, an engine rotational speed detector (43) which detects a speed of the engine, a clutch actuation device (35, 46) which actuates the clutch and controls transmission torque, a throttle opening amount detector (45) which detects an opening amount of the throttle and a controller (39, 42) which in response to the engine speed detector and throttle detector, commands the clutch actuation device so as to control the transmission of torque by the clutch according to the engine speed and throttle opening amount (Figures 5a, 5b, 6 and 7 disclose that the clutch torque is controlled based on engine speed and throttle opening). As to claim 10, Niikura discloses an engine power transmission method for transmitting a power of an engine (column 3, line 34) to a torque converter (1) via a clutch (2) which is capable of controlling a torque transmission ratio by controlling the engine in response to a throttle (according to 45) and actuating the clutch so as to control a transmission torque transmitted thereby according to an engine speed and a throttle opening amount (Figures 5a, 5b, 6 and 7 disclose that the clutch torque is controlled based on engine speed and throttle opening).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3-6, 11 and 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Fischer and Niikura in view of Coffman. Fischer and Niikura disclose the clutch being actuated so that a torque transmission of the clutch can be controlled, but as recited in claims 3-6, 11 and 12.

Coffman discloses an engine power transmission device having an engine (14) which is controlled by a throttle, a torque converter (20) which transmit a power of the engine to a load device (46), a clutch (64) which is provided between the engine and converter and is capable of controlling a transmission torque transmitted thereby, a throttle actuation device (154) which actuates the throttle, an engine rotational speed detector (112) which detects a speed of the engine, a clutch actuation device (170) which actuates the clutch and controls transmission torque and a controller (78) which in response to the engine speed detector, commands the clutch actuation device so as to control the transmission of torque by the clutch according to the engine speed. As to claim 3, wherein the clutch is actuated so that a torque transmission ratio in a lower rotational speed region amount becomes smaller than that in a higher rotational speed region (Figure 3 discloses when clutch pressure is below 1200 rpm, it is at a minimum pressure A which is smaller than a pressure B above 1200 rpm). As to claim 4, wherein in the lower region, the clutch is actuated so that the ratio increases along with an increase in the engine speed (Figure 3 discloses the pressure A increasing to pressure B when engine speed goes above 1200 rpm). As to claim 5, wherein in the higher region, the clutch is actuated so that the ratio becomes constant (Figure 3 discloses B being constant at 1400 rpm). As to claim 6, wherein in the higher region, the clutch is

Art Unit: 3655

actuated so that the ratio becomes 100% (Figure 3 discloses pressure B being constant at 1400 rpm which indicates full engagement of clutch). As to claim 11, wherein in the step of actuating the clutch, the clutch is actuated so that a torque transmission ratio in a lower rotational speed region amount becomes smaller than that in a higher rotational speed region (Figure 3 discloses when clutch pressure is below 1200 rpm, it is at a minimum pressure A which is smaller than a pressure B above 1200 rpm). As to claim 12, wherein in the lower region, the clutch is actuated so that the ratio increases along with an increase in the engine speed (Figure 3 discloses the pressure A increasing to pressure B when engine speed goes above 1200 rpm).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to have the clutch torque transmission control of Fischer and Niikura controlled in view of Coffman to control the drag or stall of the engine during operation of the powertain.

Allowable Subject Matter

Claims 7-9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

-Salecker et al 5875679, Yu 647817 and Cowan et al 5029087.

Art Unit: 3655

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TISHA D. LEWIS whose telephone number is 571-272-7093. The examiner can normally be reached on M-F 9:30AM TO 6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David Le can be reached on 571-272-7092. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Tdl
/TISHA D. LEWIS/
Primary Examiner, Art Unit 3655
March 13, 2011